the network comprising sensors capable of producing a first response in the presence of a chemical stimulus; a second sensor array connected to the network comprising sensors capable of producing a second response in the presence of a physical stimulus; and a computer comprising a resident algorithm to process the responses and **identify the analyte**. The present invention provides a **distributed sensing system**, because the sensor arrays can be separated and distributed over large spatial areas. Examples of the use of the distributed sensing system over large spatial areas include monitoring emission levels from industrial plants such as chemical and textile plants; progression of a plume of an escaped gas; and perimeter monitoring on industrial sites *(see also page 8, line 33 to page 9, line 32 of the specification)*.

The present invention provides the sensor arrays in a **networked environment** because, the data (i.e. responses) from the various spatially distributed sensor arrays are brought to a computer for processing to ultimately **identify** an unknown analyte. For example, as recited in the specification, suitable networks include a wireless or wired computer local area network, an intranet or the Internet. For example, see page 12, lines 15-18 of the specification, where Applicants clearly provide that "the sensors can be separated over larger spatial areas, wherein the sensor arrays are connected via a network, such as a computer local area network, or the Internet." Further, the methods and systems of the present invention are used to **identify an unknown analyte** based on the responses (first response and a second response) provided by the first and second sensor arrays.

II. REJECTION UNDER 35 U.S.C. §102(e)

Claims 1, 4, 6, 7, 10, 11, 19, and 22 have been rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent No. 6,196,057 B1 ("Discenzo"). Applicants respectfully submit that independent claims 1 and 19 are not anticipated and are distinguishable over the cited reference (Discenzo) for reasons set forth below. Furthermore, considering that dependent claims 2-11 (which include claims 4, 6, 7, 10, and 11) comprise all the features of independent claim 1, from which they depend, these claims are patentable to the same extent that independent claim 1 is patentable. Further, considering dependent claims 20-22 include all the features of independent claim 19, from which they depend, these claims are patentable to the same extent that independent claim 19 is patentable.

A. The Cited Reference

The Examiner states that with respect to claims 1 and 19 the Discenzo reference (U.S. Patent No. 6,196,057 B1) teaches all the elements of independent claims 1 and 19, namely that "Discenzo discloses a distributed sensing system in a networked environment for identifying an analyte,..."

However, the Discenzo reference teaches an **integrated** multi-element lubricant sensor and a system for determining the health state of a known lubricant. The sensor system of Discenzo includes sensors for **collecting data relating to a particular parameter** such as pH, temperature, electrical conductivity, etc. to **assess the health state of a known lubricating fluid**, and to determine when it's necessary to change the lubricating fluid in a rotating machinery such as an electric pump. For example, the Examiner's attention is respectfully directed to col. 2, lines 15-18, of the Discenzo reference wherein the health assessment and lifetime predication of a lubricant is set forth.

The Discenzo reference teaches a **micro** multi-element lubrication sensor for *in situ* monitoring of a plurality of lubricant parameters (see, col. 3 lines 15-17). Also see col. 7, lines 25-33, wherein the Discenzo reference provides that: **the lubricant sensor is small; the lubricant sensor is desirable for use in applications where space is at a premium**.

Furthermore, since the integrated micro multi-element sensor of Discenzo is immersed in a lubricant bath, and since the sensing elements are in close proximity to one another while immersed in the lubricant bath, and since this arrangement may cause data fragmentation and data overlap, the Discenzo reference also teaches a data fusion processor to address any potential data fragmentation or overlap issues (see, col. 3 lines 60-63).

B. Cited Reference Distinguished

The Discenzo reference does not teach or suggest the prominent elements of claims 1 and claim 19. These prominent elements of claim 1 include a **distributed sensing system**; a **networked environment**; and **identifying an analyte.** The Discenzo reference does not teach a distributed sensing system in a networked environment, it teaches an integrated and small sensor for immersion in a lubricant bath where space is a premium. On the other hand, the present invention claims a **distributed sensing system**, one in which the sensor arrays can be separated and distributed

over large spatial areas, and where the sensor data is brought together for processing in a **networked environment**.

Specifically, these elements are clearly set out in claim 1, which is shown below:

*1. A **distributed sensing system in a networked environment** for identifying an analyte, said system comprising:*

a first sensor array connected to said network comprising sensors capable of producing a first response in the presence of a chemical stimulus;

a second sensor array connected to said network comprising sensors capable of producing a second response in the presence of a physical stimulus; and

*a computer connected to said **network** having an algorithm wherein said first response and said second response are processed to **identify said analyte**.*

Additionally, the Discenzo reference is not directed to a sensing system for identifying an unknown analyte. As recited above, the sensor system of Discenzo includes sensors for **collecting data relating to a particular parameter** such as pH, temperature, electrical conductivity, etc. to **assess the health state of a known lubricating fluid**, and to determine when it's necessary to change the lubricating fluid in a rotating machinery such as an electric pump. The Discenzo reference is not directed to identifying an unknown analyte. The present invention, on the other hand, is directed towards identifying an unknown analyte, and not the mere collection of data related to a particular lubricant parameter as is taught by the Discenzo reference. Accordingly, Applicants respectfully submit that the Discenzo reference does not anticipate independent claim 1.

Turning now to independent claim 19, Applicants further submit that this claim is not anticipated by the Discenzo reference for the reasons set forth below. Specifically, claim 19 recites:

*19. A method for **transferring** a combination of chemical and physical data over a **computer network** for **identification of an analyte**, said method comprising:*

***transmitting** sensory data from a first sensor array comprising sensors capable of producing a first response in the presence of a chemical stimulus to a remote location;*

***transmitting** physical data from a second sensor array comprising sensors capable of producing a second response in the presence of a physical stimulus to a remote location; and*

*processing said sensory and physical data at said **remote location** for **identification of an analyte.***

Claim 19 embodies a method for transferring data over a **computer network** to a **remote location** for **identification of an analyte**. Clearly, the invention as described by claim 19 is directed towards a distributed system, wherein the sensors are remotely located and where the sensors' data is sent to the remote location over a computer network. Furthermore, claim 19 is directed towards a method for identification of an unknown analyte. In stark contrast, the Discenzo reference is directed to an **integrated** and **small sensor** for immersion in a lubricant bath where space is a premium. The Discenzo sensor system is used for **collecting data relating to a particular parameter** such as pH, temperature, electrical conductivity, etc. to **assess the health state of a known lubricating fluid**, and to determine when it's necessary to change the lubricating fluid in a rotating machinery such as an electric pump. The Discenzo system is not directed to transferring data to a remote location over a computer network. Moreover, the Discenzo reference is not directed to identifying an unknown analyte.

Accordingly, Applicants respectfully submit that for reasons set forth above, claims 1 and 19 are patentable over the Discenzo reference. Further, considering that claims 2-11 include all the features of independent claim 1, from which they depend, these claims are patentable to the same extent that independent claim 1 is patentable. Further, considering claims 20-22 include all the features of independent claim 19, from which they depend, these claims are patentable to the same extent that independent claim 19 is patentable. As such, Applicants respectfully request that the Examiner withdraw the anticipation rejection.

III. REJECTION UNDER 35 U.S.C. §103

A. The Examiner has rejected dependent claims 2 and 20 under 35 U.S.C. 103(a) as allegedly being obvious over Discenzo in view of U.S. Patent No. 5,469,369 to Rose-Pehrsson et al.

B. The Examiner has rejected dependent claims 3, 5, 8, and 21 under 35 U.S.C. 103(a) as allegedly being obvious over Discenzo in view of U.S. Patent No. 6,170,318 B1 to Lewis.

C. The Examiner has rejected dependent claim 9 under 35 U.S.C. 103(a) as allegedly being obvious over Discenzo in view of Lewis and further in view of U.S. Patent No. 5,728,581 to Schwartz et al.

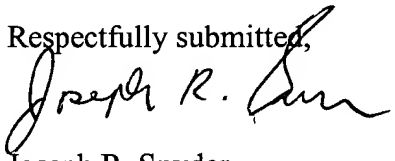
However, independent claims 1 and 19 have **not** been rejected under 35 U.S.C. §103(a). Independent claims 1 and 19 have been rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent No. 6,196,057 B1 ("Discenzo"). For reasons set forth above, Applicants respectfully submit that independent claims 1 and 19 are not anticipated and are distinguishable over the cited reference (Discenzo). Furthermore, considering that dependent claims 2-11 (which include claims 2, 3, 5, 8, and 9) include all the features of independent claim 1, from which they depend, these claims are patentable to the same extent that independent claim 1 is patentable. Further, considering dependent claims 20-22 include all the features of independent claim 19, from which they depend, these claims are patentable to the same extent that independent claim 19 is patentable. As such, Applicants respectfully request that the Examiner withdraw all the obviousness rejections.

CONCLUSION

In view of the foregoing remarks, Applicants believe all claims now pending in this Application are in condition for allowance. Further, in view of the special status of this application, the issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 925-472-5000.

Respectfully submitted,



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APPENDIX – Pending Claims

1. A distributed sensing system in a networked environment for identifying an analyte, said system comprising:

a first sensor array connected to said network comprising sensors capable of producing a first response in the presence of a chemical stimulus;

a second sensor array connected to said network comprising sensors capable of producing a second response in the presence of a physical stimulus; and

a computer connected to said network having an algorithm wherein said first response and said second response are processed to identify said analyte.

2. The system according to claim **1**, wherein said algorithm selects the most relevant sensor modality in said first and said second array to identify said analyte.

3. The system according to claim **1**, wherein each sensor of said first sensor array is a member selected from the group consisting of a bulk conducting polymer film, a semiconducting polymer sensor, a surface acoustic wave device, a fiber optic micromirror, a quartz crystal microbalance, a conducting/nonconducting regions sensor, a dye impregnated polymeric coatings on optical fiber and combinations thereof.

4. The system according to claim **1**, wherein each sensor of said second sensor array is a member selected from the group consisting of an optical sensor, a mechanical sensor, a radiation sensor, a thermal sensor and combinations thereof.

5. The system according to claim **3**, wherein each sensor of said first sensor array is a conducting/nonconducting regions sensor.

6. The system according to claim **4**, wherein each sensor of said second sensor array is an optical sensor, a mechanical sensor, a radiation sensor, a thermal sensor and combinations thereof.

7. The system according to claim **1**, wherein the transmission of said first response is conducted via wired communications.

8. The system according to claim **1**, wherein the transmission of said first response is conducted via wireless communications.

9. The system according to claim **8**, wherein said wireless communications are implemented using communications technologies selected from a member of a group consisting of infrared technology, satellite technology, microwave technology and radio wave technology.

10. The system according to claim **1**, wherein said networked environment is a member selected from the group consisting of a worldwide computer network, an internet, the Internet, a wide area network, a local area network, an intranet and combinations thereof.

11. The system according to claim **1**, wherein said networked environment is the Internet.

19. A method for transferring a combination of chemical and physical data over a computer network for identification of an analyte, said method comprising:

transmitting sensory data from a first sensor array comprising sensors capable of producing a first response in the presence of a chemical stimulus to a remote location;

transmitting physical data from a second sensor array comprising sensors capable of producing a second response in the presence of a physical stimulus to a remote location; and

processing said sensory and physical data at said remote location for identification of an analyte.

20. The method according to claim **19**, further comprising employing a sensor selection algorithm to determine sensors in said first array.

21. The method according to claim **19**, wherein each sensor of said first sensor array is a member selected from the group consisting of a bulk conducting polymer film, a semiconducting polymer sensor, a surface acoustic wave device, a fiber optic micromirror, a quartz crystal microbalance, a conducting/nonconducting regions sensor, a dye impregnated polymeric coatings on optical fiber and combinations thereof.

22. The method according to claim 19, wherein each sensor of said second sensor array is a member selected from the group consisting of an optical sensor, a mechanical sensor, a radiation sensor, a thermal sensor and combinations thereof.